

## Claims

1. Pneumatic vehicle tire with a tread strip, which has a width defined as the tread width TW, which represents its maximum width in the ground contact area in the case of mounted, loaded and inflated tires, where, when viewed in cross section, the outer contour of the tread strip has at least three different radii over its width TW, of which the first radius  $TR_1$  extends over an area encompassing the zenith of the tire, while an adjoining area on both sides of this area has a radius  $TR_2$ , which is smaller than the radius  $TR_1$ , and while on each side of this area an adjoining area has a radius  $TRA$ , which is smaller than the radius  $TR_1$  of the area encompassing the zenith of the tire, wherein each case the edges of the tread strip defined by the tread width TW run in an area with a fourth radius, a shoulder radius provided in the transition area to the sidewalls of the tire, in that the size of the radius  $TRA$  is determined according to the equation  $0.05 TR_1 \leq TRA \leq 0.65 TR_1$ , in that the radius  $TR_2$  is either smaller or greater than the radius  $TRA$ , where, for the case  $TR_2 \leq TRA$ , the size of the radius  $TR_2$  is determined according to the equation  $0.05 TR_1 \leq TR_2 \leq 0.6 TR_1$  and for the case  $TR_2 > TRA$ , the size of the radius  $TR_2$  is determined according to the equation  $0.1 TR_1 \leq TR_2 \leq 0.95 TR_1$ .

2. Pneumatic vehicle tire according to Claim 1, wherein the radius  $TRA$  is determined according to the equation  $0.15 < TRA < TR_1$ .

3. Pneumatic vehicle tire according to Claim 1 wherein for the case  $TR_2 > TRA$  the size of the radius  $TR_2$  is determined according to the equation  $0.6 TR_1 \leq TR_2 \leq 0.95 TR_1$ .

4. Pneumatic vehicle tire according to Claim 1, wherein the radius  $TR_1$  is determined according to the equation  $3 TW \leq TR_1 \leq 25 TW$ , especially according to the equation  $3 TW \leq TR_1 \leq 6 TW$ .

5. Pneumatic vehicle tire according to Claim 1 wherein the area with the radius  $TR_1$  and encompassing the zenith of the tire is determined by a separation  $TW_1$  between two points that are symmetrical about the zenith of the tire, where the separation  $TW_1$  is determined according to the equation  $0.1 TW \leq TW_1 \leq 0.7 TW$ .

5 6. Pneumatic vehicle tire according to Claim 1, wherein each area with the radius  $TR_2$  extends to two points in the outer contour that are symmetrical about the zenith of the tire, the distance  $TW_2$  between which points is determined by the equation  $0.15 TW \leq TW_2 \leq 0.9 TW$ .

10 7. Pneumatic vehicle tire according to Claim 1, wherein each case the transition to the shoulder radius takes place at a distance  $RA$  from the edges of the tread strip, which is 1.5-14%, especially 3-10%, of the tread width  $TW$ .

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